

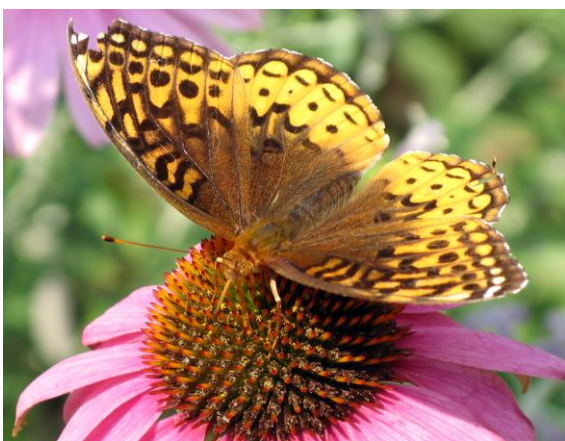
Northwoods Journal – August 2015

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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Prairie Walk at the Harmony Arboretum



A prairie walk will be held on **Thursday, August 21 from 6:00-8:00 p.m.** to learn more about our native prairie ecosystems and the plants and animals that live there. It's a beautiful time of year for prairie plants and many are in bloom. Wear good walking shoes and insect repellant is recommended.

For more information about these programs and more, see the Harmony Arboretum Calendar on page 8, or call the Land & Water Conservation office at 715-732-7780, or visit www.marinettecounty.com. The Harmony Arboretum is located 7 miles west of Marinette, ½ mile south of State Highway 64 on County Road E. It's open to the public year-round and free!

10th Annual Sand Lake Conservation Camp a Great Time

By Anne Bartels, Information & Education Specialist



2015 Sand Lake Conservation Camp participants

The 10th annual Sand Lake Conservation Camp held at Camp Bird near Crivitz was again a success this year, with 95 campers representing 28 Wisconsin and 3 Upper Michigan counties, and 22 dedicated staff. This event, organized by the Marinette County Land & Water Conservation Division (LWCD), is for youth going into 6-8th grade in the fall. This camp provides positive educational outdoor experiences, fosters an appreciation for nature, and introduces a variety of natural resources and conservation career opportunities to youth.

Core topics, presented by Marinette County staff, included aquatic macroinvertebrates, herptiles, and water pollution/conservation. The fourth core topic, wetland habitat, was presented by Peter Ziegler of the Wisconsin Waterfowl Association. Evening presentations were given by Wisconsin Department of Natural Resources Fisheries Biologist Chip Long and Conservation Wardens Tim Werner and Paul Hartrick (see below). They spoke about their careers, educational backgrounds, and tools they use in their jobs. Naturalists Kim Diedrich and Jodie Sperduto from the Bay Beach Wildlife Sanctuary in Green Bay brought several native Wisconsin animals and discussed wildlife rehabilitation & conservation issues. A scavenger hunt, campfire building contest (see below), making s'mores and pudgy pies, and "Conservation Jeopardy" were also part of camp.



WDNR Conservation Wardens talk to campers



Campers in each cabin work together to build a fire to burn through the string, which then releases a flag up the post to signify the winners - this happened to be the winning cabin!

Campers participated in a variety of activities, including wilderness survival, kayaking & canoeing, wolf ecology, outdoor recreation safety, trapping,

plant identification, raptor rehabilitation, archery, t-shirt design, spinner making, outdoor first aid, orienteering, birdhouse building, leathercraft, and teambuilding/low-ropes challenge course activities.



Learning to kayak on Sand Lake

Activities were presented by Marinette County staff and guest speakers. Bill St. Martin of the Cycle Path in Menominee led kayaking; Jeremy Cords, WDNR, led outdoor recreation safety; Richard and Maryann Clark of Clark's Willowtree Fur of Coleman led trapping; Rock Anderson led plant identification; and Marla Sutton led the outdoor first aid sessions. Ray Leonard and Julia Robson of the Timber Wolf Information Network presented wolf ecology sessions, and Abbey Krumrie and staff from the Raptor Education Group, Inc. taught sessions on raptor rehabilitation.



Abbey Krumrie of REGI talks with a camper about the peregrine falcon



Free time swimming fun!

Financial support and camper scholarships were provided this year by the Wisconsin Wildlife Federation; the Phoenix Falls Chapter of Wisconsin Woodland Owners Association; Green Bay Chapter of Trout Unlimited; American Legion Post 280 of Coleman; Wisconsin Land & Water Conservation Association; and Glacierland Resource Conservation & Development. Land & Water Conservation departments in Sauk, Portage, Green Lake, Washington, Vilas, and Oneida Counties joined Marinette County in offering scholarships to campers. Sponsors' dedication to youth programs like Sand Lake Conservation Camp is much appreciated. Many campers would not be able to attend otherwise.

For more information about Sand Lake Conservation Camp, please visit www.marinettecounty.com or contact Anne Bartels, Information & Education Specialist, at abartels@marinettecounty.com. Tentative dates for 2016 are June 22-24.

The *Rewilding* Revolution: Growing Nature Lovers in the Big City
 From <http://www.childrenandnature.org>, written by Scott Sampson



How can both humans and nature thrive? This question is one of the most pressing of our time, worthy of deep consideration by each and every one of us. And, thanks to unique natural and cultural contexts, the answer will be different for every place. A major part of the solution may just come from a young concept known as “rewilding.” Although generally used to refer to big-scale conservation efforts to protect, restore, and connect wilderness areas, *rewilding* is equally applicable to cities and surrounding natural areas. The notion can also be applied to people’s minds, bodies, and spirits—an antidote to denatured lives.

Richard Louv makes a strong case that, whereas the twentieth century was the time of nature conservation, the twenty-first century must be the era of nature restoration. And a great place to begin—detailed by Doug Tallamy in his wonderful book, “Bringing Nature Home”—is by re-seeding our cities and suburbs with native plants. Such “wildscaping” attracts more native insects, which are quickly followed by birds and other animals. The local web of life becomes more robust and diverse, more capable of fighting off unwanted intruders. Nearby nature wins by boosting its diversity and staving off extinctions. We win by inhabiting nature-rich settings that foster connection with nature while boosting our health and well-being.



Sounds great, right? But how might we begin the rewilding process? Today, every major city in the country features multiple organizations that aim to connect people, and especially children, with nature. The list includes independent schools, natural history museums, environmental education organizations, botanical gardens, zoos, planetariums, aquariums, science centers, and nature centers. The great majority of these organizations are doing amazing things, positively impacting the lives of dozens, hundreds, even thousands of children. *Yet despite this plethora of nature-related offerings, the disconnect between children and nature has ballooned to an all-time high. Our young people continue to break records in consumption of technology while becoming increasingly detached from the natural world.* In short, we haven’t figured



out how to “move the needle” on nature connection at an urban scale.

A new approach is needed. Rather than so many organizations working in relative isolation, the solution is more likely to come from multi-partner collaborations aimed at scaling nature connection efforts. A first step would be bringing together representatives from local governments, non-profits, higher education, K–12 schools, foundations, and industry. Ideally, the resulting working group would act like a Swiss Army knife, each organization functioning as a distinct tool with unique capacities.



For example, Toronto has embarked on a citizen-driven Homegrown National Park Project for Canada, which aims to create a vibrant green corridor along a creek in the city’s west end. Meanwhile, The Children & Nature Network recently partnered with the National League of Cities to foster collaborations aimed at adding more nature to urban settings. All over the country, multi-partner greenspace alliances are forming.

Imagine rewilding schoolyards, backyards, courtyards, urban trail systems, empty lots, and parks with native species, all with the help of local communities. It wouldn’t take long to transform urban and suburban landscapes into a thriving new norm. Best of all, this rewilding revolution, particularly in its initial stages, doesn’t require oversight or permission or even much in the way of expertise. Anyone can participate simply by planting some native plants.



Who will drive urban and suburban rewilding efforts? For the most part, it’ll be people like you and me. Scaling efforts to foster deep nature connection will depend on two things: access and engagement. Access involves rewilding cities and suburbs, ensuring that everyone, regardless of skin color or family income, lives close to beautiful a greenspace.



Engagement is all about rewilding minds, ensuring that children get plenty of nature play and experiential learning outdoors. Who else other than engaged citizens like us are going to take on the heavy lifting? Odds are excellent that this work will be some of the most important, enjoyable and satisfying that any of us will ever do.

National Pollinator Garden Network Launches Million Pollinator Garden Challenge



The Million Pollinator Garden Challenge is being launched by The National Pollinator Garden Network, an unprecedented collaboration of national, regional, conservation and gardening groups to support the President’s Executive Strategy to “Promote the Health of Honey Bees and Other Pollinators.”

WASHINGTON, DC (June 3, 2015) - In an unprecedented collaboration, dozens of conservation and gardening organizations joined together today to form the National Pollinator Garden Network and launch a new nationwide campaign – the **Million Pollinator Garden Challenge**. Designed to accelerate growing efforts across America, the Network is launching the Challenge in support of President Barack Obama’s call to action to reverse the decline of pollinating insects, such as honey bees and native bees, as well as monarch butterflies.

The National Pollinator Garden Network collectively represents nearly one million active gardeners and 15,000 schoolyard gardens. **The Network is challenging the nation to reach the goal of one million additional pollinator gardens by the end of 2016.** The Network will work to provide resources for individuals, community groups, government agencies and the garden industry to create more pollinator habitat through sustainable gardening practices and conservation efforts.

As noted in President Obama’s 2014 Presidential Memorandum on Pollinator Health and recently released National Strategy to Promote the Health of Honey Bees and Other Pollinators, federal action combined with private sector partnerships and strong citizen engagement can restore pollinator populations to healthy levels. Pollinator gardens provide one way to reverse that decline by offering food, water, cover and places to raise young for honey bees, native bees, butterflies, hummingbirds and other pollinators.



Monarch butterfly on *Coreopsis*

To tackle these challenges, the Network is rallying hundreds of thousands of gardeners, horticultural professionals, schools, and volunteers to help reach a million pollinator gardens over the next two years. Any individual can contribute by planting for pollinators and joining this effort to provide a million pollinator gardens across the United States. Every habitat of every size counts, from window boxes and garden plots to farm borders, golf courses, school gardens, corporate and university campuses. Everywhere we live, work, play and worship can, with small improvements, offer essential food and shelter for pollinators.

“If we all work together — individuals, communities, farmers, land managers, and local,

Continued next page



Area Farmers' & Flea Markets



Crivitz Flea & Farmers' Market

'Downtown' across from Village Hall & St. Mary's Church on Thursdays (May 21 – September 3). 8am – 4pm Handmade Arts & Crafts, Antiques & Collectables, Wood products, Vegetables, Clothes, Jewelry, Canned items, Plants and so much more! Come check out the assorted vendor items, visit local businesses and chat with our vendors. For vendor information, please call Barb Uhl at (715) 854-2030.

Marinette Main Street Farmers Market

Open Friday, June through the end of September from 9am-2pm by the Welcome Center at 1680 Bridge Street. Cost for Vendors is \$5 for daily spot, \$50 for seasonal spot. First come, first served. New Vendors always welcome. Forms available at the Welcome Center. Call Sarah Monahan at Marinette City Hall 715-732-5139 or the Welcome Center at 715-732-4333 for more information.

Marinette & Menominee Community Flea Market

Marinette and Menominee flea markets will be held the 2nd Saturday of each month at the M&M Plaza in Menominee from 7am-2pm. Vendor space is free but is first come – first served. Vendors are asked to set up near the old car lot south of Mikolas Jewelry store. (No rain dates). All vendors are asked not to sell fruit, food or baked goods. Have questions call 906-863-4808 or hbayerl@hotmail.com.

Menominee Historic Downtown Farmers Market

– June through beginning of October. Saturday from 8am-Noon, and Wednesday from 3-6pm. The Farmers' Market is located at 1st Street and 8th Street (across from the bandshell) in Menominee, MI. For more information, contact Lucy Pier at 906-863-8718, or visit www.menomineefarmersmarket.com.



For more information about area markets, visit Marinette County's tourism website at www.therealnorth.com or call the Marinette/Menominee Area Chamber of Commerce at 715-735-6681.

Challenge, continued from page 2

state, and federal agencies — we can ensure that every American child has a chance to enjoy the beauty of creatures like bees, monarch butterflies, and hummingbirds," said Collin O'Mara, president and CEO of the National Wildlife Federation. "By joining forces with the National Pollinator Garden Network on the Million Pollinator Garden Challenge, the National Wildlife Federation and our affiliates are amplifying these collective efforts to address the growing threats affecting so much of America's treasured wildlife."

"Bees are vital in seed and agriculture production, as well as general ecosystem health, and ensuring their wellbeing is a priority," said Andrew W. LaVigne, president and CEO of the American Seed Trade Association. "ASTA's diverse membership includes companies with expertise in the production of seed for pollinator forage and health. We look forward to working in tandem with the White House and members of the National Pollinator Garden Network to increase the outreach and education of this important initiative."



Bumblebee on Baptisia

"National Garden Bureau supports gardens of all types, done by any type of gardener for any reason and gardening for the health of pollinators is a priority for NGB and our members," said Diane Blazek, executive director of the National Garden Bureau. "We are thrilled to be part of the National Pollinator Garden Network and look forward to the day we reach one million pollinator gardens registered in the Million Pollinator Garden Challenge."

"Horticulture has a huge opportunity to be part of the solution to the threats facing pollinators, and we look forward to working together to meet the challenge," said Michael Geary, president and CEO of AmericanHort. "All pollinators are critical to our ecosystems, as well as our Nation's economic well-

being. We know that honey bees alone contribute over \$15 billion to U.S. food production," said Jennifer Tedeschi, COO at National Gardening Association. "NGA has worked for over 40 years to educate people of all ages about the personal and community benefits of gardening. We are thrilled to be partnering with so many experts in conservation, ecosystems, and horticulture to bring this challenge to the American people and engage them in protecting pollinators thereby protecting our environment and food systems."

"Pollinators are critical to our survival. Our member gardens preserve and restore existing pollinator habitats as well as create new places where millions of Americans can appreciate the indispensable role of plants and their allies," said Casey Sclar, executive director of the American Public Gardens Association. "We are proud to work with our network collaborators and federal agency partners on this important effort."



Monarch butterfly larva munching on milkweed

"Pollinator Partnership has worked for pollinator health for nearly two decades, and we are thrilled to see this seminal moment arrive; thanks to the National Pollinator Garden Network, an extraordinary collaboration has been formed to support every American in providing the help that pollinators desperately need in every landscape," said Laurie Davies Adams, executive director of the Pollinator Partnership. "What a profound and important opportunity this is - we are coming together as a nation to share our landscapes with bees and butterflies; each of us can support the very creatures that support us every day." A full list of National Pollinator Garden Network partner organizations can be found at www.millionpollinatorgardens.org.

For information on how you can help pollinators, contact the Marinette County UW-Extension office at 715-732-7510, or visit the office on the third floor of the Marinette County Courthouse. Or email Gina Thompson, UWEX Horticulture Assistant, at gthompson@marinettecounty.com.



Marinette County Fair in Wausauke August 27-30!



The fair features 4-H and open class exhibits, merchant's exhibits, raffles, music, midway entertainment, livestock auction, truck and tractor pulls, and the demolition derby. Stop in for an old-fashioned good time. Wausauke Fairgrounds price for gate admission is \$5 per day or \$15 for the weekend. \$12 advance weekend tickets available at Sal's in Wausauke, Witt's Piggly Wiggly in Crivitz, Associated Bank of Coleman, Lee's Family Foods in Peshtigo, & the M&M Chamber of Commerce

in Marinette. \$2 admission for the day on Sunday (Family Day). Children 5 and under are free. Carnival wristband prices are \$15 each for Thursday and Friday from 2-5 p.m. They are \$20.00 each for Thursday and Friday 6-10 p.m. and for Sunday from noon to 4 p.m.



For more information, visit www.marinettecountyfair.com or call 715-938-4099



Northwoods Journal Online

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Microbeads - Down the Drain and Into Our Food Web?

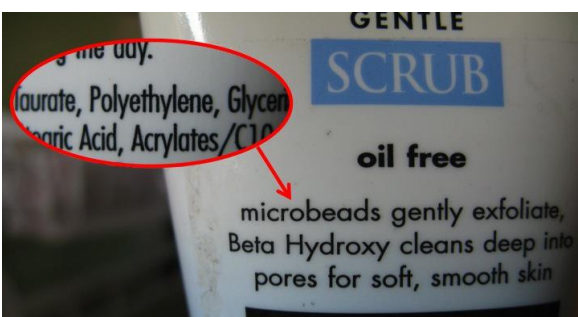
Reprinted from *Lake Tides*, Fall/Winter 2014

Research and analysis published over the past year has revealed a new threat to lake health coming from an unlikely source: face wash. The companies that make face wash have been increasingly using tiny plastic “microbeads” to improve the scrubbing capabilities of their products. **The microbeads, often under one millimeter in diameter, slip through most municipal wastewater treatment systems.** Their ability to stay suspended in liquids is both part of what makes microbeads popular with manufacturers (they prevent the exfoliant from settling to the bottom of a container) and part of what makes them so problematic (once floating in open water, they resemble insect eggs and other food sources to fish – see photo below). **The accumulation of microbeads in lakes and rivers is beginning to alarm scientists who are just starting to understand the ecological implications.**



For many years, ocean researchers have pointed to the ocean gyres – the famous being the “great Pacific garbage patch” – as evidence that human waste products are wreaking havoc on a global scale. The currents of the oceans have steadily steered floating debris into relatively small, concentrated areas. Floating on or just below the surface, plastic bags and all sorts of various flotsam gradually breaks down into smaller and smaller pieces. Fish and birds perceive the bits of floating plastic as food. The debris can quickly cause health problems, as is found too often on the remote Midway Islands where nesting albatrosses feed their young a diet of plastic garbage until their chicks die on the nest. A more complex problem arises from the toxins that tend to concentrate on the floating plastic: PCBs and other endocrine disruptors that bioaccumulate in the food web and impact species that are not directly feeding on plastic debris.

In the realm of inland lakes, we have taken a number of steps to minimize the amount of large floating plastic debris. Wastewater systems and stormwater sewers generally intercept a great deal of litter before it hits the water, and it is now socially unacceptable in most places to simply throw garbage into a lake. The microbeads in our cleaning products threaten to introduce the bioaccumulation problem into more Midwestern food webs, potentially even impacting people who catch and eat fish from lakes.



Lorena Rios-Mendoza is an assistant professor of chemistry at UW-Superior. She began research

on pollutants associated with plastic debris found near Baja, California in the 1990s. In 2012 Lorena participated in a research project to see how common floating plastic debris was in the Great Lakes. While large plastic debris was uncommon, the research showed surprising amounts of microbeads. The concentration generally increased along a downstream gradient in the Great Lakes system, with the highest amounts – over half a million pieces per square kilometer – found in Lake Erie. Another plastic pollution survey conducted by Dr. Sherri Mason and her team during the summers of 2012 and 2013 revealed over twice that amount in Lake Ontario (1.1 million per square kilometer). Mason, a chemistry professor at the State University of New York, Fredonia, found that approximately 70% of the plastic they skimmed off the top of the Great Lakes was between one-third and one millimeter in diameter!

More recently, scientists from McGill University in Canada reported measurable concentrations of plastic microbeads in the river sediment of the St. Lawrence River. Their findings indicate that plastic concentrations in river sediment are similar to the most contaminated ocean sediment samples. No research has been done yet to look at how microbeads are impacting smaller inland lakes and rivers. *Where municipal systems discharge treated wastewater into rivers or lakes, it is highly likely that microbeads are being discharged as well.* We also know very little about how microbeads move and affect private on-site wastewater systems (septics). Since some septic waste is pumped and then treated at municipal plants, they too could be delivering plastic debris to the environment.



While the growing amount of microscopic plastic debris is troubling, society is already figuring out ways to turn off this pollution spigot. The simplest remedy is to stop buying and using products that contain microbeads. This includes not only soaps and toothpaste, but certain makeup products as well. This past summer, Illinois passed a law that gradually bans the sale of products with microbeads, eliminating them from store shelves by 2019. According to a recent news article in Racine's Journal Times, State Senator Bob Wirth and State Representative Tod Ohnstad are planning to introduce a bill in the next legislative session to create a similar ban in Wisconsin.

Manufacturers are already responding, with industry giant Unilever pledging to eliminate microbeads in their products by 2015. In the meantime, millions of pounds of new microbeads will join the untold amounts already moving through our waterways.

20 Outdoor Family Activities



Summer is here! Are you looking for some fun outdoor activities to do with your family? Check out this list and enjoy your summer!

- Go on a nature scavenger hunt. Take a walk on the wild side and head out to your favorite forest, desert, swamp or prairie and see who can find everything on the list first!
- Splash around at a water park. Everyone will love splashing around on the rides and the sprinkler park.
- Visit the zoo. Make sure to check the schedule ahead of time to plan your visit.
- Make sidewalk art. Grab a bag of colorful chalk and head outside to create beautiful works of art!
- Go rock climbing. Just make sure to try out this sport with a knowledgeable guide who can help you stay safe while you climb.
- Ride in a hot air balloon. Soar into the skies, see the world from above and take a ride to remember.
- Have a car wash. Head out to the garage and soap up your car with the help of the whole family - wear bathing suits because this is bound to be a sudsy affair!
- Spend a day at the beach. Grab the whole gang and head out for a day on the sandy shores!
- Plant a garden. Summer is the perfect time to break ground with all your family. For extra fun, plant a butterfly garden and enjoy their beauty all summer long.
- Have a block party. Gather up your neighbors and head to the streets. Bounce houses, barbecue, music, games...
- Go bird watching. Grab some binoculars and a favorite bird book and head for your local forest.
- Build an obstacle course. Do you have a bunch of old boxes and other weird things clogging up your garage? Grab a stopwatch and see who can make it through the fastest.
- Have a water balloon fight. How about filling up some water balloons and having the water balloon fight of the century?



- Take a family hike. Don't let the hot weather keep you indoors. Go explore your favorite natural spot together as a family.
- Fly kites, and try making your own homemade kite.
- Build a tree house. How about building one together as a family! It will be a great learning experience!
- Go on a bug safari. Creep around your backyard and see all the amazing things that live right there beneath your feet.
- Have a bike parade. Invite the neighborhood gang over bust out the art supplies, and give everyone a chance to decorate their bike with flags, streamers and more. Then bike around town for everyone to see.
- Go puddle-jumping. Don't let those rainy days get you down. Throw on a pair of galoshes & old clothes and head outside. Your kids will be overjoyed when they know that you *want* them to jump in all the puddles!
- Take a night hike. Grab some flashlights and take a night hike, around your neighborhood or at your local natural area. Listen for sounds you hear only at night and look for interesting night critters. Bring a few blankets and after your hike, everyone can enjoy a few moments relaxing under the stars in the open sky.



Swimmer's Itch – What You Should Know

From <http://dnr.wi.gov/lakes/swimmersitch/>

"Swimmer's itch" occurs in some Wisconsin Lakes each year. Swimmer's itch is caused by the larvae (immature stage) of certain flatworms that can be picked up while swimming. Technically known as *schistosoma dermatitis*, swimmer's itch appears as red itching, bite-like welts within several hours of leaving the water (below). It is neither dangerous nor contagious, but is very uncomfortable.



When the larva penetrates the skin, it causes a small red welt. The degree of discomfort and bodily reaction varies with the person's sensitivity and the degree of infestation. In some people, the reaction may be hardly noticeable. Others have considerable pain, fever, severe itching, and swelling. The swelling usually subsides within a week, but the redness can last longer.

Swimmer's itch organisms are most commonly noticed in early summer, when the water is its warmest. The season is relatively short - usually four to six weeks, depending on the weather.

It's best to regard swimmer's itch in the same manner as mosquitos, wood ticks and deer flies; there really is nothing that can be done to eliminate them, and our best action is to learn how to reduce exposure. Often these creatures we consider pests are signs of a healthy and diverse outdoors environment. Overall they shouldn't discourage us from enjoying the many outdoor activities we can experience when we venture into their outdoor habitat.

Preventing Swimmer's Itch

Some people have noted that waterproof sunscreens and lotions reduce the infections. If you decide to go in the water when and where swimmer's itch larvae are present, stay clear of plants growing in the lake. Swimming rather than playing or wading in shallow water will reduce exposure. Swim offshore if possible. If swimmer's itch is known to be present, avoid swimming when winds are likely to be carrying the organisms into the beach.



The most important thing to do to prevent the itch is to rub down very briskly right after leaving the water. This can crush the organisms before they can penetrate the skin. Showering shortly after leaving the water also should help.

Easing Swimmer's Itch

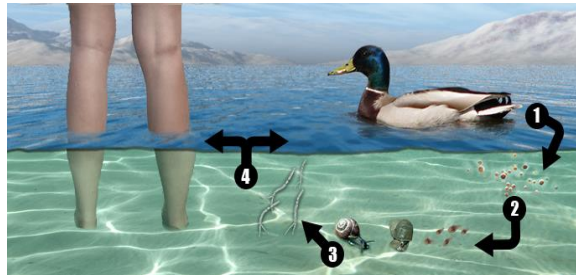
After the swimmer's itch organisms have penetrated the skin, there is little that can be done to treat it. You may get some relief by using soothing lotions such as calamine or lotions containing antihistamines and/or local anesthetics. In severe cases, see a physician.

More about Swimmer's Itch

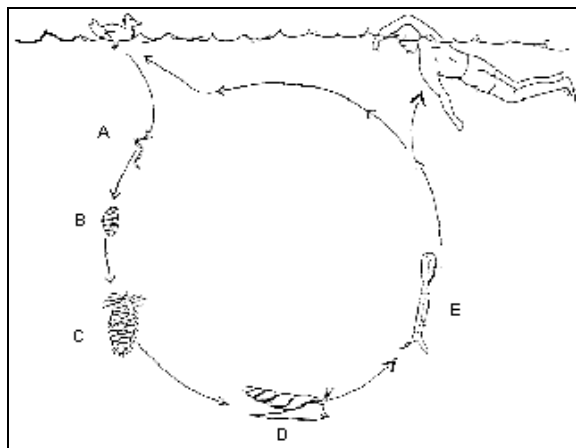
Swimmer's itch is widespread in Wisconsin and has been reported in many other states, Europe, and elsewhere in the world. There seem to be no special characteristics of lakes having the problem. Some of the finest recreational waters in the state experience swimmer's itch annually, whereas other lakes may have an occasional outbreak or none at

all. An outbreak may be severe, but last for only a few days, or minor and last much of the season.

The flatworm parasite (*schistosoma*) lives as an adult in suitable mammals and birds, such as mice and ducks. The adult worm sheds its eggs via the host's excretory tract into the water (#1, below). Here they hatch into a free-swimming stage called a *miracidium* (#2). The miracidium swims in search of a proper second host animal, a particular type of snail. If a proper snail is found, the miracidium will penetrate into the snail's tissue and develop further (#3). After a three- or four-week development period, another free-swimming stage called a *cercaria* emerges from the snail in search of the proper primary bird or mammal host (#4).



Below: life cycle of a flatworm. (A) blood fluke carried by bird. (B) egg. (C) miracidium. (D) snail host. (E) cercaria seeking a host.



The cercariae release happens when the water temperatures reach their near-maximum summer temperature. This usually occurs in late June or early July in northern Wisconsin, coinciding with peak water recreational activities. At this time the organism can accidentally contact bathers and cause swimmer's itch. In years of warm spring weather, swimmer's itch has occurred as early as May in northwestern Wisconsin.

A swimmer's itch problem may develop with a few as 2 percent of the snails infected. However, snail populations may be as high as 400 per square meter. One infected snail may release up to 4,000 cercariae per day. At the 2 percent infection rate, this would mean up to 32,000 cercariae would be produced per square meter per day. *On a typical 100' x 100' beach area, this translates into a potential 30 million cercariae released each day!* Most are released between noon and 2 p.m. With little free-swimming abilities, they will swim to the surface to optimize their chance of contacting a suitable animal host. Concentrated near the surface, wind and currents may carry them up to four miles from the release area.

The cercariae may not penetrate the skin until after the bather leaves the water, at which time the person may feel a slight tingling sensation. The cercariae are soon killed by the body's natural defense mechanism, but will continue to cause irritation. Studies have shown that 30 to 40 percent of people contacting the parasites are sensitive and experience irritation. Small children playing in shallow water are most susceptible because of the alternate wetting and drying with the arms, legs and waist area most prone to infection.

There is no effective way for people to eliminate swimmer's itch on their beach. Any attempts to control swimmer's itch by treatment to kill either the cercariae or their snail hosts are ineffective because cercariae are capable of swimming or drifting long distances from non-treated areas. It makes no difference if your beach area is sandy, rocky or weedy. Host snails will live on all sites

and one species which commonly harbors swimmer's itch actually prefers sandy-bottom areas.



Feeding of ducks should be discouraged if swimmer's itch is known to be a problem on the lake, since waterfowl are an important adult host to the parasite. New occurrences of swimmer's itch seem to be strongly associated with people feeding and attracting ducks. In recent years, there have been experimental attempts at treating the host birds with veterinary medicines. The theory is to rid the birds of the adult parasite before they can infect the snail population with miracidia. Depending on the different kinds and numbers of adult hosts, success at this method will be limited to very specific situations. Thus far, the procedure is considered impractical on a lake-wide scale in Wisconsin. Modern pesticide laws prohibit treatments as they were historically attempted.



Treatments to kill snails are very harsh and kill many non-target plants and animals and may also lead to contaminated sediments. Some high-use public beaches on specific sites where incoming drift of cercariae is unlikely, have been issued permits for a highly reduced treatment, but the result is very temporary and questionable. Anyone proposing any kind of pesticide or chemical treatment for any purpose must obtain a permit from the Department of Natural Resources.

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The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

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- Marinette Co. Parks & Outdoor Recreation
- Marinette Co. UW-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County LWCD
1926 Hall Ave, Marinette, WI 54143
abartels@marinettecounty.com





A Walk on the Wet Side – Water Striders

By Anita Carpenter, *Wisconsin Natural Resources Magazine*

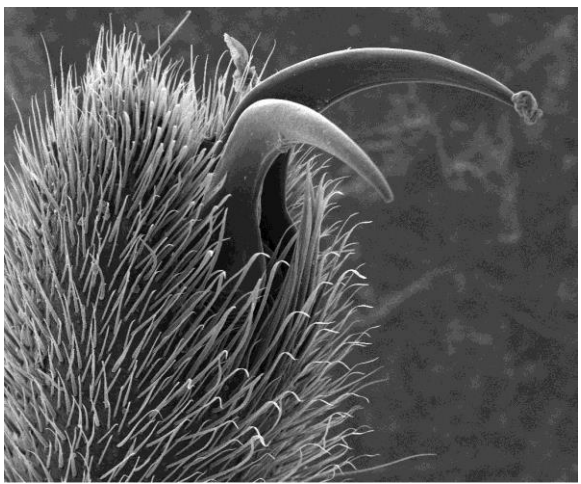
A light touch and hairy toes help these bugs stride across the water. They skate gracefully on thread-like legs over glass-smooth water. From spring into autumn, water striders glide back and forth, here and there, on the surfaces of quiet ponds and slow-moving streams.



Water striders belong to the insect order *Hemiptera* (true bugs) and the family *Gerridae*. Of the 45 to 60 water strider species in North America, about 12 call Wisconsin home. The slender, dark-colored insects range from a half-inch to an inch long. Females are generally larger than males.

When water striders skate into view a natural question is how do they perform the enviable feat of walking on water? First, recall a discussion from Physics 101. Calm, smooth water has a tension on its surface created by weak, asymmetrical, attractive forces between water molecules. Thus light objects will float on water and heavier objects break the surface tension and slip below.

If you can catch an elusive, quick-darting strider (a challenge in itself), look at its four back legs that are used for locomotion. Use a hand lens to look at the position of the tarsal claws. On "typical" insects, each pair of tiny tarsal claws is located at the tip or apex of the insect's leg. On water striders, the claws are positioned a millimeter or so farther back up the leg – far enough that they do not penetrate the water and break the surface tension when the insect moves (photo below). A second adaptation is each leg is covered with many fine, velvety-looking, *hydrofuge* hairs. These water-repelling hairs prevent the legs from becoming wet - wet legs would also break surface tension.



Tarsal claws on a water strider - this picture was taken with a scanning electron microscope at 120x magnification

Now that we know how water striders stay afloat, notice how they move in two different ways – a slow, graceful glide and skating motion, or a quick spurt and dart. The glide or skate is accomplished when the insect rows with its middle legs while its rear legs trail and steer like a rudder. Water striders skate when facing upstream against a current or when orienting to other objects on the surface like food or other striders. Darting uses both pairs of back legs for propulsion. Quick movements are necessary when pursuing insect prey, eluding danger or when males grab females.

Water striders obtain food by waiting for living or dead insects to drift by or by responding to vibrations produced by struggling insects caught on the surface. Sensory receptors on the tips of their legs pick up the vibrations and help the striders orient and zero-in on potential meals. The striders

dart into action, grab their victims with strong, raptorial front legs, pierce the victims' bodies with their beak and inject digestive enzymes. The enzymes dissolve and liquefy the victim's internal organs which are then sucked up. The exoskeleton is discarded.



Water strider with prey

Striders also mate on the water surface. Depending on the species, males may defend small circular territories while waiting for females to drift by or they may lure females by tapping the water with their legs to create "good vibrations" to which the females respond. Males may just pounce on females. Once the pair gets together, after an initial struggle and rebuke by the female, mating is fairly quick, but the pair can remain together for several hours. After mating, the female lays her eggs on submerged rocks and logs. Nymphs hatch in about two weeks and swim to the surface where they must break the surface tension and climb on top of the water. Over the next few weeks, nymphs molt five times before becoming adults. Wisconsin species may produce one or two generations of striders per year. Water striders overwinter as adults under stones at the pond bottom and emerge the following spring when mating commences.

Water striders spend most of their short lives on the water, but life is not endless days of calm water and sunshine. Danger is ever-present. If a wave breaks the surface tension or wets the striders' legs, the fragile insects may slip or be dragged underwater and drown. To survive this misfortune, the insects must crawl onto shore, a rock or vegetation to dry their legs before venturing back onto the water. Meanwhile, insect-eating birds flit overhead while hungry fish and frogs lurk below. Back swimmers, other predaceous aquatic insects, respond to movement on the surface and prey on water striders, especially mating pairs. To fend off these dangers, water striders often rest on floating vegetation to reduce their visibility and vulnerability.

Water striders are really cool insects to study. I was surprised to discover that the shiny, silver racing stripes on the sides of one large species are not colored markings, but rather are composed of fine, silver, hydrofuge hairs that glisten in the sunshine. So wade right in and take a closer look at one of the only insects capable of walking on water.



Environmental Education Is Year-round in Marinette County!

The Land & Water Conservation Division's Information & Education Specialist, Anne Bartels, is pretty busy during the year. In addition to teaching school-year environmental education programs, she attends area events & presents public programs in the summertime for a variety of local groups & organizations.



"Nature Art" at City Park for the Marinette Recreation Department's summer programs



Searching for insects in the Harmony Arboretum prairie with kids from the Crivitz Youth Center



"Skins & Skulls" program at the Boys & Girls Club



"Hands-on nature" table at Marinette's annual Logging & Heritage Festival

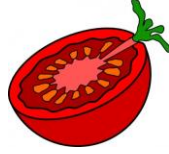


Exploring the creek during "Aquatic Creepy Critters" for the UW-Marinette Kids' College



Managing Tomato Pests

By: Scott Reuss, Marinette County UW-Extension Horticulture Agent



Tomatoes are one of the most popular garden vegetables, but they can be the target of multiple disease and insect pests that affect their yield or fruit quality. This is the time of the year when our office receives many, many samples of tomato fruit and plants for problem diagnosis.



Here, we will introduce the more common problems and help you be able to identify them and know how to manage them more effectively. First, some general management tips that can help avoid pest or physiological problems:

- Buy high quality plants from reputable sources. Whether you start plants from seed on your own or buy transplants, make sure they are healthy and pest-free when you buy them. If they don't look right, don't buy them. There are a number of viral diseases that may be found in tomatoes, usually causing leaf curling, uneven coloring or yellow streaking/spotting, and cause stunted plants with smaller, poor tasting fruit.
- Have good growing conditions. This means placing the tomatoes in full sunlight, having fertile soil or fertilizing correctly, and watering correctly and consistently.
- Rotate where tomatoes are grown. Most diseases that affect tomatoes survive in the soil on last year's plant material. Do not try to grow tomatoes in a spot that had tomatoes, potatoes, eggplants, or peppers last year, if at all possible.
- Stake or trellis the plants. The higher the percentage of the plant that touches the soil, the higher the likelihood of insect and disease problems. Staking will also help maintain good air flow around and through the plants. Air flow is very important to help ward off either the start of diseases, or slowing down disease spread within the plants.
- Mulch around the plants. In conjunction with trellising or staking, using straw, plastic, or other mulch materials will slow down the start of foliar diseases, and will also help your soil hold moisture. The one negative is that it creates a better slug environment.

The major problems encountered when growing tomatoes in our area include Septoria leaf spot & early blight; fruit Anthracnose; Blossom end rot; and slugs. Other problems may include Hornworms, Fruitworms, Chipmunks, and Cutworms.



Hornworm larva

The most devastating tomato pest that we have in our area is a pair of diseases that act alike, look nearly alike, and are treated in the same manner - **Septoria Leaf Spot and Early Blight**.

Both diseases are caused by fungal pathogens that survive on decaying organic matter and get started when spores from the fungi contact the leaves from a tomato plant, usually due to soil being splashed up onto leaves by rain or irrigation droplets. The disease move upwards in the canopy either by splash effect or by leaves touching each other. Both diseases cause brown spots on the leaves, usually surrounded by yellow rings.



Characteristic dark spots caused by *Septoria lycopersici*

As the disease worsens, entire leaves will fall off due to these lesions. If left unmanaged, these diseases often result in plants with very few, if any, leaves left by the end of August. Thus, fruit quality and quantity is drastically lowered due to excess sun on the fruit, lower photosynthetic capacity of the plant, and ease of other pests infecting the already stressed plant.

Management of this disease complex starts with proper rotation and cleanliness, proper mulching and staking, and looking for lesions on lower leaves and removing these leaves. Another option is to utilize fungicides as protectants, either prior to disease symptoms showing, or combining leaf removal and fungicide use after you see first spots. Fungicides containing the active ingredients *Chlorothalonil*, *Maneb*, or *Mancozeb* are the most effective, but need to be used on approximately a 7-day spray interval, and sprayed thoroughly over the entire plant.

Fruit Anthracnose is the most common disease of the fruit. The disease causes sunken spots on ripe fruit, usually with a black center as spots age. Anthracnose can usually be avoided or minimized via rotation, staking/trellising & mulching, and proper picking of fruit. The presence of foliar diseases will often indicate that anthracnose may also be present as the fruit ripen, so be ready to pick fruit properly and use them right away on such plants.



Fruit Anthracnose

Blossom end rot is common, but is not actually a disease. Most gardeners think it is a disease because it shows up as sunken spots at the tip of the fruit, often increasing in size as fruit increases in size or maturity. The real problem is a lack of calcium getting to the tips of the fruit, usually caused by insufficient, or inconsistent, water availability to the plant. Roma-type tomatoes are much more susceptible to blossom end rot, as are tomatoes grown in containers. Make sure to have consistent water available to your plants,

and add one-half cup garden lime to your soil-less mix if growing in containers.



Blossom end rot

Managing diseases with mulch is a very good thing, but one unfortunate side effect is that we create better environments for **slugs**. These arthropods can cause damage to fruit by chewing round holes at night. The fruit then usually rots and become useless. You can manage slugs by spreading crushed shells (egg, zebra mussel, etc...) or diatomaceous earth around your plants. You can also hand pick them at night or on cloudy days; put boards down between plants and then turn the boards over during the day and crush them; use slug control products such as Slug-Go; or put saucers of beer right at ground level, which they crawl into and perish (as in photo below).



Lastly are the occasional problems. **Cutworms** are an early season pest that are easily avoided by either wrapping paper around the plant stem base or by placing open-ended cans or plastic bottles around young plants, pushing them at least half an inch into the soil. **Hornworms** and **fruitworms** are large caterpillars that are best managed by picking them off the plant and crushing them, as it is very rare to find more than one or two on a plant at a time. **Chipmunks** also like ripening fruit as a healthy snack. If you don't mind sharing some of your produce, they usually don't eat too many. But, if they are a significant problem, you can either use small mesh fencing to exclude them, or (as they are an unprotected species) you can use fatal methods such as rat traps.



Cutworm on tomato

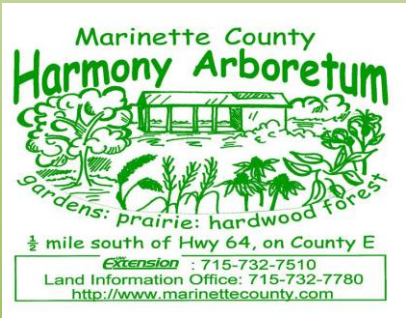


Area Events Calendar



- May 28-Sept.3** **Area Museums Open.** Marinette & Menominee County Historical Museums, Peshtigo Fire Museum, Amberg Historical Complex, Busville Doll Museum (Crivitz), Land of Oz Museum (Wausaukee) & West Shore Fishing Museum (M-35 north of Menominee, MI). Visit <http://therealnorth.com/museums.htm>.
- June-October** **Marinette Farm Market** (new location). Marinette Farmer's Market will be at the parking lot of the Marinette Welcome Center at 1680 Bridge Street. For more information contact Sarah at 715-732-5120 or the Welcome Center at 715-732-4333. 9am to 2pm every Friday.
- June-August** **Forgotten Fire Winery Summer Concert Series.** Join the fun every Saturday in June, July and August for the outdoor concerts. Music starts at 1pm and ends at 4pm. No carry-ins please. Visit www.forgottenfirewinery.com for a full listing of artists performing during the 2015 season. In Peshtigo, kick off in on June 6.
- June-Sept.** **Falling Waters Winery Summer Concert Series.** Join the fun every Friday in June, July, August and September 4 from 5 to 8:30pm for live music at the winery. No carry-ins please. Visit www.fallingwaterswinery.com for a full listing of artist performing during the 2015 season. In Crivitz on Dyer Street – kickoff is on June 12.
- August 1** **Family Life Sized Game Night!** Stephenson Island Gazebo. 6 – 9pm. Unplug and unwind with the family on Saturday nights throughout the community. Thanks to the generosity of LE Jones, there is no charge to come out and play! Kids need to be accompanied by an adult.
- August 1** **Falling Waters Winery 1st Anniversary Party!** 11am to 4pm. Charlie Scoggins. In Crivitz on Dyer Street. For more information go to www.fallingwaterswinery.com.
- August 1** **Pembine 5th Annual Community Run.** Run at Pembine American Legion Park, Minnie & Willis Street and will include walkers as well in the 5K event. All participants receive a t-shirt and medal (medals unique to the Pembine Run). For more information call 715-324-5182 or <http://pembinerunwalk2015.webs.com/>.
- August 2** **Concerts in the Park.** Evergreen Park, Wausaukee. “Bob Jicha-Jake” 2:00pm Refreshments available, bring your own seating.. More information, call 715-856-5341.
- August 4** **Sunset Concert Series.** Stephenson Island in Marinette; 7 PM Free musical entertainment. The Contrary. For more information, please call the MMCC at (715) 735-6681.
- August 5** **Nature with Anne ~ Tree Tots** (Grades Pre-K – 3). 1pm at City Park at the pavilion. An introduction to trees, tree parts and functions and a hike to study trees up close. Free program, pre-register at the Civic Center, 715-732-5222.
- August 7** **Family Water Bash.** Civic Center Pool in Marinette, 6:15-8:15pm. Theme is “Raft Building”. Call the Rec. Dept. at 715-732-5222 for more information.
- August 6 - 10** **32nd Annual Waterfront Festival** at Menominee Marina Park. Thursday: children’s parade, food booths open at 4pm, children’s activities, fire house safety tours, and music 4pm & 7pm. Friday: brats for breakfast, food booths open at 4pm, children’s activities, water ball contest, sailboat race and music 4pm & 7pm. Saturday: 5k run & 5k walk, YMCA fitness demonstrations, M&M Amateur Radio Club, food booths open at 11am, children’s activities, kayaking demonstrations, music 2:30pm & 5:15pm, and fireworks (9:15pm). Sunday: food booths open at 11am, parade at noon, Drum & Bugle Corp. performance 2-7pm. For more information call 906-863-2656 or visit www.menomineewaterfrontfestival.com.
- August 6** **Movies in the Park.** Movies on Thursday evenings at Littleland Playground in Crivitz Community Veterans Park. This week showing “The Wizard of Oz”. Movies begin at 9:00 p.m. In case of inclement weather, movies held at the Crivitz High School beginning at 8:15pm. Bring chairs or blankets and mosquito spray and get your spot early - concessions are available for purchase! For more information contact Jolene Huc at (715)854-2521 ext 385.
- August 9** **Concerts in the Park.** Evergreen Park, Wausaukee. “Sig Loomis” 2:00pm Refreshments available, bring your own seating. More information, call 715-856-5341.
- August 12** **Bands at Badger Park.** Badger Park in Peshtigo. Neon Detour. Free musical entertainment, 6:30-8:30pm. Concerts held Wednesday evenings with concessions available at 5:30pm. Call 715-582-1141 for more information.
- August 14** **Beach Party at Red Arrow Park.** 10am – 1pm Kiddie Carnival games – just 10 cents each. Win tickets to redeem at the prize table. Hot dogs, Popcorn and beverages for sale too! No pre-registration required. Event will be held rain or shine at the enclosed pavilion.
- August 14** **Family Water Bash.** Civic Center Pool in Marinette, 6:15-8:15pm. Theme is “Luau”. Call the Rec. Dept. at 715-732-5222 for more information
- August 14** **Movies in the Park.** Stephenson Island, Marinette at dark. “Cinderella” shows at the gazebo. No admission, bring your own blankets & chairs and enjoy the show. Concessions available.
- August 15** **Aurora Half Marathon & 5K Run / Walk.** Marinette High School – 7am start Half Marathon, 8am start 5K Run/Walk. On line registration at <https://register.chronotrack.com/reg/form?eventID=13896>.
- August 15** **44th Annual M&M Antique Auto Club Show.** 8am-4pm at Menominee’s historic waterfront, with trophies awarded at 3pm. Sponsored by the Motor Company. Registration from 8am-11am; more information call William Chartrand at 715-582-0347.
- August 16** **Concerts in the Park.** Evergreen Park, Wausaukee. “Wild Wood Flower & the Weeping Willows – Bryon Sparr, Mountain Music” 2:00pm Refreshments available, bring your own seating. More information, call 715-856-5341.
- August 20** **Concerts in the Park.** Great Lakes Memorial Marina in Menominee, MI, 7-9pm - The event is free of charge. Community Jazz Ensemble will be playing. For more information, please call the Marinette/Menominee Area Chamber of Commerce (MMCC) at (715) 735-6681.
- August 20** **Movies in the Park.** Movies are held on Thursday evenings at Littleland Playground in Crivitz Community Veterans Park. Movies begin at 9:00 sharp! In case of inclement weather movies are held at the Crivitz High School beginning at 8:15pm.Bring chairs or blankets and mosquito spray and get your spot early - concessions are available for purchase! For more information contact Jolene Huc at (715)854-2521 ext. 385. Showing “Willy Wonka & the Chocolate Factory”.
- August 23** **Concerts in the Park.** Evergreen Park, Wausaukee. “Timber Chords” 2:00pm Refreshments available, bring your own seating.. More information, call 715-856-5341.
- August 23** **Art in the Park.** John Henes Park, Menominee MI. Sponsored by the Menominee Area Arts Council, showcasing & selling original artwork. Art activities available for all ages. Visit the MAAC website at www.cityofmenominee.org/maac.html for more information or call 906-863-8246.
- August 26** **Bands at Badger Park.** Badger Park in Peshtigo. Music Jar. Free musical entertainment, 6:30-8:30pm. Concerts held Wednesday evenings with concessions available at 5:30pm. Call 715-582-1141 for more information.
- August 27** **Movies in the Park.** Movies are held on Thursday evenings at Littleland Playground in Crivitz Community Veterans Park. Movies begin at 9:00 sharp! In case of inclement weather movies are held at the Crivitz High School beginning at 8:15pm.Bring chairs or blankets and mosquito spray and get your spot early - concessions are available for purchase! For more information contact Jolene Huc at (715)854-2521 ext. 385. Showing “Home”.
- August 27-30** **Marinette County Fair** at the Wausaukee Fairgrounds. See page 3 for more information.

Harmony Arboretum
Schedule of Events



All programs are free and at Harmony Arboretum unless otherwise stated. For more information, call UW-Extension at 715-732-7510 or Land & Water Conservation at 715-732-7780.

August 4 - Fruits as Ornamentals, 6:30 - 8:00 p.m. Many of the smaller stature fruit species can serve two purposes in the landscape—being both edible and ornamental. Discussion will focus on the fruit varieties that are well behaved enough to be used as such.

August 21 - Prairie Walk 6:00 - 8:00 p.m. Stroll the 17-acre prairie at Harmony Arboretum with local native plant enthusiasts. Spend an evening learning what constitutes a prairie and why people are creating or restoring them. The prairie flowers should be nearing their peak at this time.

August 20 - Recipe & Concept Gardens 6:30 - 8:00 p.m. These types of companion planting-based beds can get the whole family involved in home food production or landscape design. They can be as interesting and unusual as the gardeners who grow them.

What’s New at the Children’s
Learning Garden at
Harmony?



New signage throughout the garden



A view from the beaver lodge into the CLG



The new potting shed, containing kids’ gardening tools and equipment

